USER'S MANUAL

RDP2010UX(-TS)

1600 x 1200(20.1") TFT LCD MONITOR

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SAFETY INSTRUCTIONS

CAUTION

RISK OF ELECTRIC SHOCK
DO NOT OPEN

CAUTION: TO REDUCE THE RISK OF ELECTRIC SHOCK,
DO NOT REMOVE COVER (OR BACK).
NO USER-SERVICEABLE PARTS INSIDE.
REFER SERVICING TO QUALIFIED SERVICE PERSONNEL.

CAUTION: DOUBLE POLE / NEUTRAL FUSING.
DISCONNECT POWER BEFORE CHANGING FUSE.

Precautions

ON SAFETY

1. Before connecting the AC power cord to monitor, make sure the voltage designation of the monitor corresponds to the local electrical supply..
2. Never insert anything metallic into the cabinet openings of the monitor; doing so may create the danger of electric shock..
3. To avoid electric shock, never touch the inside of the monitor. Only a qualified technician should open the case of the monitor.
4. Never use your monitor if the power cord has been damaged. Do not allow anything to rest on the power cord, and keep the cord away from areas where people can trip over it.
5. Be sure to hold the plug, not the cord, when disconnecting the monitor from an electric socket.
6. Unplug your monitor when it is going to be left unused for an extended period of time.
7. Unplug your monitor from AC outlet before any service.
8. If your monitor does not operate normally - in particular, if there are any unusual sounds or smell coming from it – unplug it immediately an authorized dealer or service center.

ON INSTALLATION

1. Openings and fans in the monitor cabinet are provided for ventilation. To prevent overheating, these openings and fans should not be blocked or covered. Also avoid using the monitor on a bed, sofa rug, or other soft surface, doing so may block the ventilation openings and fans in the monitor cabinet. If you put the monitor in the enclosed space, be sure to provide adequate ventilation.
2. Put your monitor in a location with low humidity and minimum of dust.
3. Do not expose the monitor to rain or use it near water. If the monitor, accidentally, get wet, unplug it and contact an authorized dealer immediately. You can clean the monitor with damp cloth if necessary, but be sure to unplug the monitor first.
4. Place your monitor on a solid surface and treat it carefully.
5. Locate your monitor near an easily accessible AC outlet.
6. High temperature can cause problems. Do not use your monitor in direct sunlight and keep it away from heater, stoves and other sources of heat.

ON CLEANING

The screen is made of thin glass with a plastic surface and can be damaged if dropped, hit and scratched. Do not clean the front panel with keton-type materials(e.g., acetone), ethyl alcohol, toluene, ethyl acid, methyl or chloride – these may damage the panel.

ON REPACKING

Do not throw away the carton and packing materials. They make an ideal container which to transfer the unit. If you have any questions about this unit, contact your authorized dealer.

ON DISPOSAL

This unit contains which can pollute the environment if disposed carelessly. Please contact our nearest representative office or your local environmental office in case of disposal of this unit.

ON VESA MOUNTING

- Make sure to unplug before installing this product. Otherwise, it may cause a fire or could give an electric shock.
- Do not install this product by yourself. Contact the qualified service technician. Otherwise, it may cause injuries.
- Do not install this product on the place where it cannot be supported. Otherwise, it may cause the product to fall and could cause injuries.
- Contact the qualified service technician for moving or replacing this product after installing. Installing the product needs specified technique, so it may cause safety problem to move or install it by yourself.
- Do not hang on or impact on this product. Otherwise, it may cause the product to fall and could cause injuries.
- Do not install this product by alone. Get some help from others. Otherwise, it may cause the product to fall and could cause injuries.
- Do not place a heat source or a humidifier under the installed product. Otherwise, it may cause a fire or could give an electric shock.
- Do not install this product near a high voltage electric line, any power source or the place where impact or vibration can affect.
- Do not install this product barehanded. Otherwise, it may cause injuries.
- The screw is not provided to user as default. Use the screw, which can stand the weight of this product. And, we recommend the machine screw BH(+)M4 x 14mm to 18mm as type

BRIEF DESCRIPTION

GENERAL

This specification defines the requirements for the RDP2010UX, 20.1" COLOR DISPLAY TFT LCD monitor with 1600 X 1200 pixels visible resolution, which is designed and tailored for use in operator display systems such as Rugged and Industrial monitor applications.

The RDP2010UX has a 20.1" diagonal viewable display area and 1600 x 1200 pixels addressable resolution. The (0.085 X RGB) X 0.255 mm dot pitch LCD provides the most accurate and crisp images on the screen for mission critical applications.

The RDP2010UX provides 16.7 million true colors (8-bit) per pixel. Each pixel is divided into Red, Green and Blue sub pixels which are arranged in vertical stripes and each sub-pixel is controlled in 256 grey levels.

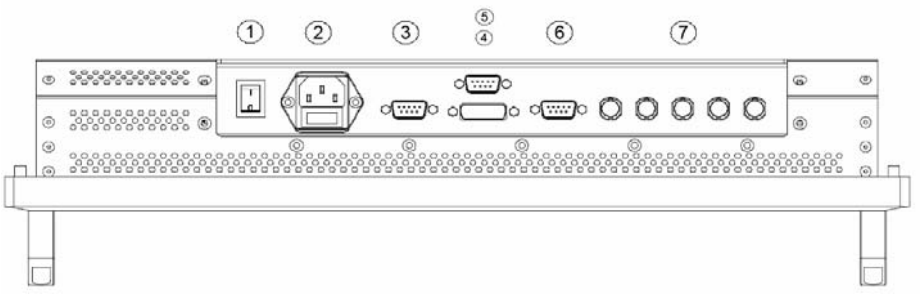
The RDP2010UX is standard rack mountable. And, touch-screen of resistive type may be provided as option.

KEY FEATURES

- Color display 20.1" TFT LCD Monitor
- Full 1600 x 1200 resolution
- Two Analog (BNC and D-sub) input, single DVI-D input.
- RS-422, RS-485 and RS-232 Communication
- Versatile mechanical version : Rack mount, Desktop Type(T.B.D) , VESA Mount Type(T.B.D)
- Free Voltage power : AC 100 ~ 250Vac, 50/60Hz±3
- Option: Resistive type Touch screen, Serial control(DB-9)

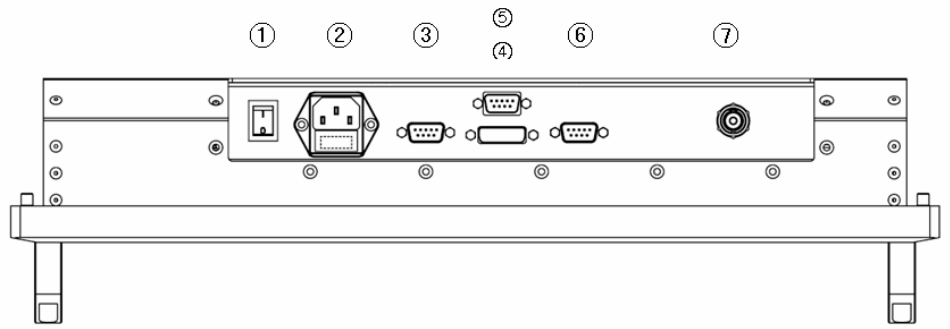
INPUT DIAGRAM

RDP2010UX (Touch screen option)



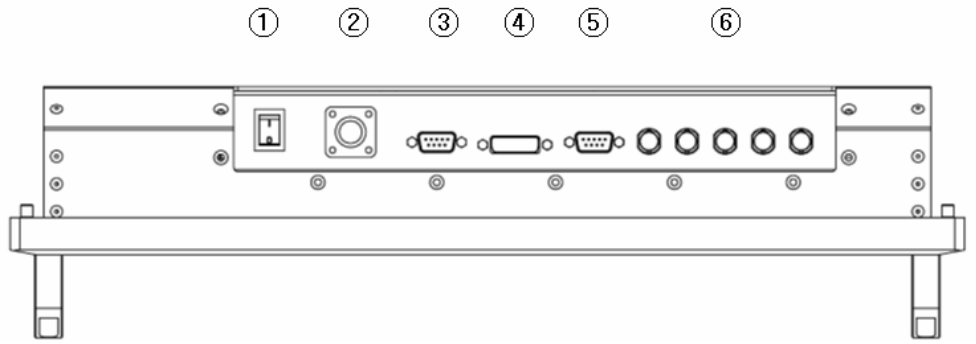
① Power Switch
② Power Inlet
③ Serial Interface
④ DVI-D Input
⑤ Touch Screen Serial Control (option)
⑥ D-Sub Input
⑦ BNC Input

RDP2010UX (CVBS option)



① Power Switch
② Power Inlet
③ Serial Interface
④ DVI-D Input
⑤ Touch Screen Serial Control (option)
⑥ D-Sub Input
⑦ Composite Video Input(BNC)

RDP2010UX (MIL MS-3100F10SL-3P option)



① Power Switch
② AC MIL power Inlet
③ Serial Interface
④ DVI-D Input
⑤ D-Sub Input
⑥ BNC Input

- BNC and D-sub input connectable to any source compatible to general CRT monitor
- Digital input fully compatible to DVI-D Standard of VESA DDWG
- Chain of Power just one level through power output totally

1. TECHNICAL SPECIFICATIONS

1.1 ELECTRO-OPTICAL SPECIFICATIONS

1.1.1 Screen Specifications

1.1.1.1 Panel Technologies
- AMLCD (Active Matrix Liquid Crystal Display) technology
- Amorphous silicon TFT (Thin Film Transistor) technology

1.1.1.2 Screen Dimensions
- Aspect ratio 4:3
- Active screen size:
  - 408 (H) x 306 (V) mm (16.06” x 12.04”)
  - 510.5 mm (20.1”) diagonal

1.1.1.3 Display colors
- 16,777,216 true colors (8-bit), 256 grey scales

1.1.1.4 Resolution
- 1600 (H) x 1200 (V) pixels
- Pixel arrangement: RGB (Red dot, Green dot, Blue dot) Vertical Stripe
- Pixel pitch: 0.255 (W) x 0.255 (H) mm

1.1.1.5 Display mode
- Normally Black

1.1.2 Optical Characteristics

1.1.2.1 Protective Filter Glass
- Clear, Strengthening glass
- Anti Reflective Film and Anti-Static Treatment

1.1.2.2 Luminance (Brightness)
- 280 cd/m² (typ. typical on LCD)
- 200 cd/m² (max. typical on Protective Filter Glass)
- 200 cd/m² (max. typical on touch screen)
- Dimming Ratio: 1000 to 1
- White uniformity: 75% max.

1.1.2.3 Contrast ratio
- 700 : 1 (typical on LCD)

1.1.2.4 Viewing Angle: At the contrast ratio > 10:1
- Horizontal: +/- 89° (typical)
- Vertical: +/- 89° (typical)

1.1.2.5 Response time @ 25°C ambient
- Tr : (White → Black)
- Td : (Black → White)
- Tr + Td : 16 ms (typical)

1.1.3 Input Signal Specifications

RDP2010UX provides maximum four (4) input signal interfaces, 2 x Analog (BNC,D-sub) Input ,1x Digital Input and 1x Composite video Input.

- Standard input resolution is UXGA (1600 x 1200 pixels)
- Other resolutions are supported as specified below. No scaling is provided for input signals with resolutions less than the standard input resolution 1600x 1200 pixels.

Resolution		Hsync (KHz)	Vsync (Hz)
VGA	640 x 480	31.0 - 43.0	60.0 - 85.0
SVGA	800 x 600	35.0 - 53.7	56.0 - 85.0
XGA	1024 x 768	48.4 - 68.3	60.0 - 85.0
SXGA	1280 x 1024	64.0 – 91.2	60.0 - 85.0
UXGA(analog)	1600 x 1200	75.0 – 93.8	60.0 - 75.0
UXGA(digital)	1600 x 1200	75	60.0

1.1.3.1 Analog Input

- Analog RGB input signal shall be as follows:
  - Video Signal Level: 0.714 Vp-p nominal
  - Video Signal Polarity: Positive (Black to White). Polarity is detected automatically. Both 0 V to +0.714 Vp-p and -0.714 V to 0 Vp-p is allowed.
  - Video Input Impedance: 75Ω terminated (RGB Video Signal)
  - Sync: TTL voltage levels, External Separate H & V Sync.
  - Interlace: Non-interlaced

1.1.3.2 Composite Video Input

- Color system : NTSC,PAL,SECAM
- Signal Connector : BNC

1.1.3.3 Input Selection

In case multiple input source is connected, input to be displayed can be selected by:

- Manual: Operator can select the input manually using control panel.

1.1.4 Controls of the Display

1.1.4.1 Remote Control via serial ports (JH Communication compatible)

- There are serial ports on the back side of the RDP2010UX for remote control of the monitor by customer application.
  - RS-232/422/485 port: D-Sub, 9p, Female (for JH protocol)

1.1.4.2 Control via OSD

- Control block with the push buttons is available: Menu, Select, ◀ and ▶. Settings are selected by the Menu that guides you through the OSD menu.
- Control block also has ◀ and ▶for dimming brightness.
- Control block also has LED indicators, refer to 1.1.5.

1.1.5 LED Indicator

- Fault information in available by LED indicators
- Normal : Green indicator
- Soft Power Off: Amber indicator
- No signal : Amber Blinking (every 1 second) indicator
- System Fault : Red indicator

1.1.6 Power Supply Specification

1.1.6.1 Voltage range

- Standard :100 –-240Vac(Normal), 47~63Hz,1.7A
- Voltage Range : AC 100 - 250V

1.1.6.2 Power consumption

	Normal	Max. (100% Light output)
RDP2010UX	70 W	75W

1.1.6.3 Power variation protection

- Unit will not be damaged when Voltage transients remain within value as defined in the applicable voltage range

1.1.6.4 Over-temperature protection

- When the internal temperature gets above than the warning level (65℃), the light output of the backlight is half. And, LED as red color
- When the internal temperature reaches above the critical Value (80℃), the light output of the backlight is turned off. And, LED as red color
- When the internal temperature gets below than the safe level (64℃), the light output of the backlight is restored. And, LED recovers to green.

1.1.7 Connectors

1.1.7.1 Power connectors

- Standard: IEC type connector
- MIL MS-3100F10SL-3P (option)

1.1.7.2 Input signal connectors

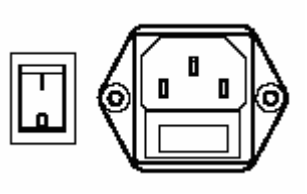
- Analog Input : 5 Coaxial BNC connectors for R, G, B, HS and VS
  D-Sub 15pin connector
- Digital input : DVI-D connector
- Composit video input (option) : BNC connector

1.1.7.3 Interface connectors for remote control

- RS-232/422/485 port: Sub D, 9p, Female (for JH protocol)
- Touch screen serial control (Option): 9p Dsub female

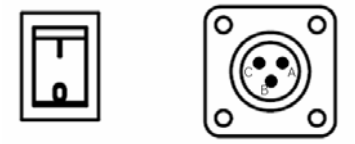
1.1.8 Connection & PIN Assignment

Power Input / output



- AC 100-250V, 47~63Hz
  with double pole / neutral fusing, 250V F3.15AL
- Disconnect power before changing fuse
- Chain thru power output to limit to one level totally

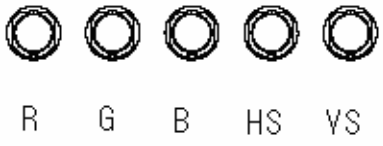
MIL Power Input / output(option)



- MIL MS-3100F10SL-3P
- AC 100-250V, 47~63Hz

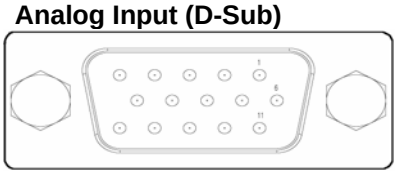
1. A: Live(hot) line
2. B: Ground
3. C: Neutral line

Analog Input (BNC)



- R : Analog Red Signal Input (0.7 Vpp, 75 ohm)
- G : Analog Green Signal Input (0.7 Vpp, 75 ohm)
- B : Analog Blue Signal Input (0.7 Vpp, 75 ohm)
- HS : Horizontal Sync Signal Input (TTL)
- VS : Vertical Sync Signal Input (TTL)
- Connection Type : 5 x BNC

Analog Input (D-Sub)



- Connection Type : 15p D-Sub Female (Analog only support)

1. Red
2. Green
3. Blue
4. Ground
5. DDC Ground
6. Red Ground
7. Green Ground
8. Blue Ground
9. back up
10. sync Ground
11. Ground
12. DDC Data
13. H sync
14. V sync
15. DDC Clock

Video Input (BNC) (option)

- CVBS : Composite Video Signal Input
  (1.0 Vpp / Sync.negative, 75 ohm)

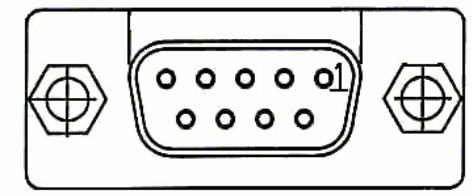
Digital Input

- Connection Type : DVI-D Female (Digital only support)

1. TMDS Data 2-
2. TMDS Data 2+
3. TMDS Data 2/4 Shield
4. TMDS Data 4-
5. TMDS Data 4+
6. DDC Clock
7. DDC Data
8. No Connection
9. TMDS Data 1-
10. TMDS Data 1+
11. TMDS Data1/3 Shield
12. TMDS Data 3-
13. TMDS Data 3+
14. +5V power
15. Ground (Return for +5V)
16. Hot Plug Detection
17. TMDS Data 0-
18. TMDS Data 0+
19. TMDS Data 0/5 Shield
20. TMDS Data 5-
21. TMDS Data 5+
22. TMDS Clock Shield
23. TMDS Clock+
24. TMDS Clock-

C1 ~ C5 : No Connection

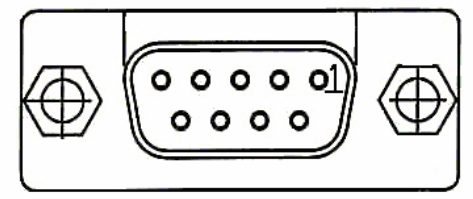
Serial Interface



- Remote In(female)

1. No connection
2. RxD (for RS-232)
3. TxD (for RS-232)
4. TxIN_- (for RS-422/485)
5. RxIN_- (for RS-422/485)
6. No connection
7. Ground
8. TxIN_+ (for RS-422/485)
9. RxIN_+ (for RS-422/485)

Touch Screen Serial Control(option)



- Touch screen serial control(female)

1. DCD("carrier detect", handshake='0' (POSITIVE) when controller power on)
2. RXD (serial data from controller to host)
3. TXD (serial data from host to controller)
4. DTR ("data terminal ready", handshake='0' (POSITIVE) when controller may send)
5. SG (signal ground)
6. DSR ("data set ready", handshake='0' (POSITIVE) when controller power on)
7. RTS ("ready to send", handshake='0' (POSITIVE) when controller may send)
8. CTS (used as "ready to receive", handshake='0' (POSITIVE) when host may send)
9. RI (not used)

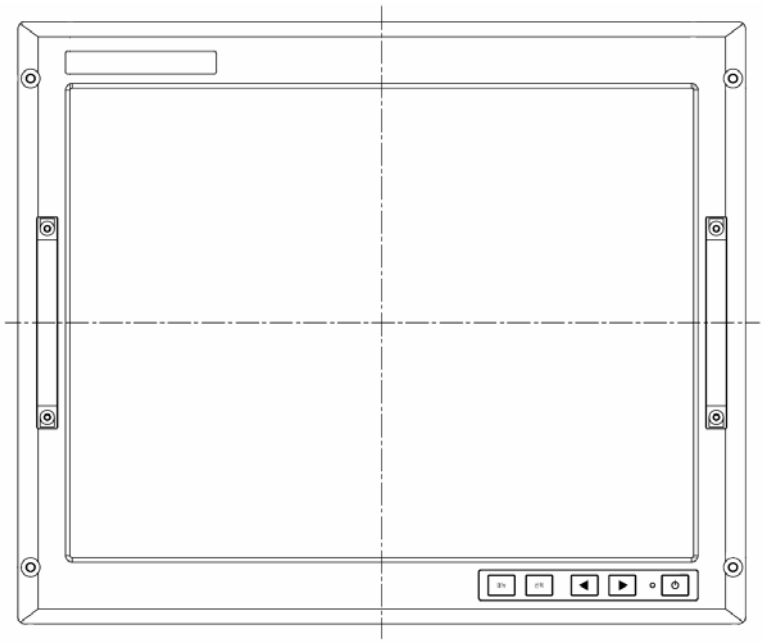
1.2 MECHANICAL SPECIFICATIONS

1.2.1 Dimension and Weight (Rack Mount)

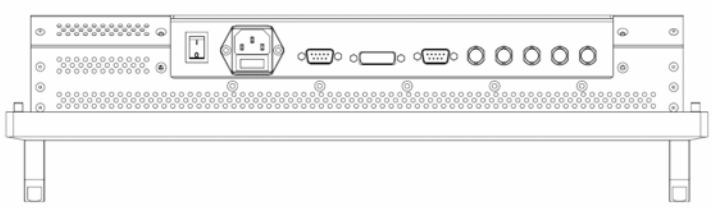
The dimension of the unit is as shown in the table below:

	Monitor only	Packing
Height (mm / inch)	399 / 15.70	661/26.02
Width (mm / inch)	482 / 18.97	701/27.60
Depth (mm / inch)	125.5 / 4.94	377/14.84
Weight (kg / lbs)	11 / 24.25	18.5/40.79

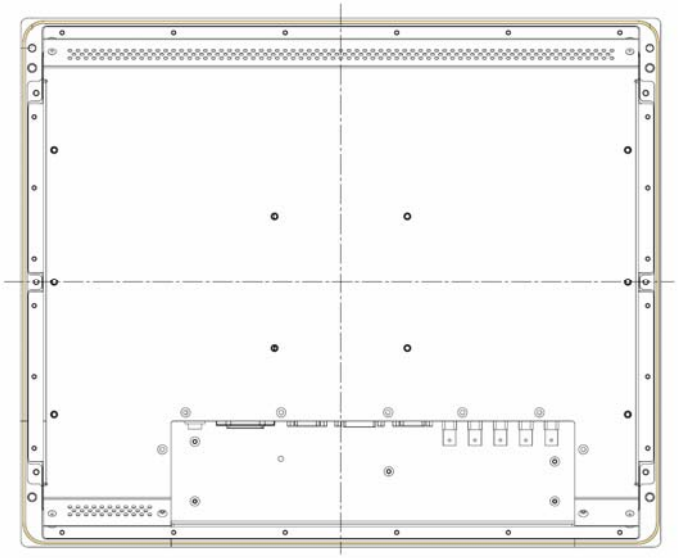
The following figures show a Rack Mount version mechanical dimension. RDP2010UX basically provides three input connectors and all connectors are located the bottom side of monitor.



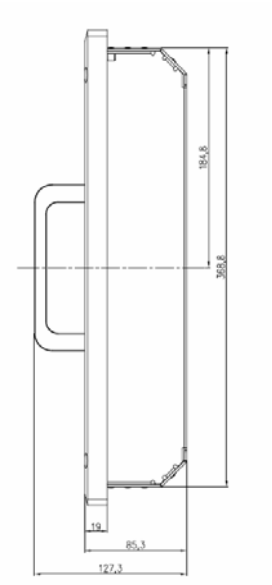
< Front View : Unit mm >



< Bottom View >



< Rear View >



< Side View : Unit mm>

1.2.2 Mounting

The weight for the unit shall not exceed 11 kg (24.25 lbs)

- Fixing: using 4 captive M6 bolts in front bezel
- RDP2010UX can be Standard rack mounted with an optional adapter plate

1.2.3 Finishing

- Standard Bezel color is Black (Rack Mount Type)
- Other bezel colors can be made available on request

1.2.4 Screws/Bolts

- Number of screws to use for maintenance: reduced to minimum
- Type of screws requires maximum 3 standard tools

1.2.5 Components

Industrial extended temperature range components are used for cost, maintainability and reproducibility purposes.

1.2.6 Cooling

The Unit does not need any forced air-cooling

1.3 ENVIRONMENTAL SPECIFICATIONS

1.3.1 Temperature, Vibration, Shock, Humidity(Except touch screen model)

#	item	spec	Details	cycle
1	High temp., Storage	MIL-STD-810F,Method 501.4	Procedure I	7
2	High temp., Operating	MIL-STD-810F,Method 501.4	Procedure II	3
3	Low temp., Storage	MIL-STD-810F,Method 502.4	Procedure I	3
4	Low temp., Operating	MIL-STD-810F,Method 502.4	Procedure II	1
5	Humidity	MIL-STD-810F,Method 507.4	Procedure I	10
6	Vibration	MIL-STD-167-1	Type I	-
7	Shock	MIL-STD-810F, Method 516.5	Procedure I	-

1.3.2 EMC(Except touch screen model)

#	item	spec	details
1	Conducted Emission, Power Lead	CE 102	10KHz to 10MHz
2	Conducted Susceptibility, DC and AC Power Leads	CS 101	30Hz to 150KHz
3	Conducted Susceptibility, Bulk Cable Injection	CS 114	10KHz to 200MHz
4	Conducted Susceptibility, damped sinusoidal transients, cable and power leads	CS 116	100KHz to 100MHz
5	Radiated Emission, Magnetic Field	RE 101	30Hz ~ 100KHz
6	Radiated Emission, Electric Field	RE 102	10KHz to 18GHz
7	Radiated Susceptibility, Magnetic Field	RS 101	30Hz to 100KHz
8	Radiated Susceptibility, Electric Field	RS 103	2MHz to 40GHz

1.3.3 Drip-proof

- Front side is drip-proof. Test shall be done when the unit is mounted in a console.

  Front bezel: IP64

1.4 OHTER SPECIFICATIONS

1.4.1 Maintainability

MTTR (Mean Time Between Repair)

- RDP2010UX is defined as a Line Replaceable Unit (LRU) and the unit is designed to allow for an MTTR less than 0.5 hour (30 minutes).

- Use of maintenance equipment
  A modular design is taken for the unit. No special tools or equipment are required for maintenance purpose.

1.4.2 Use of toxic materials

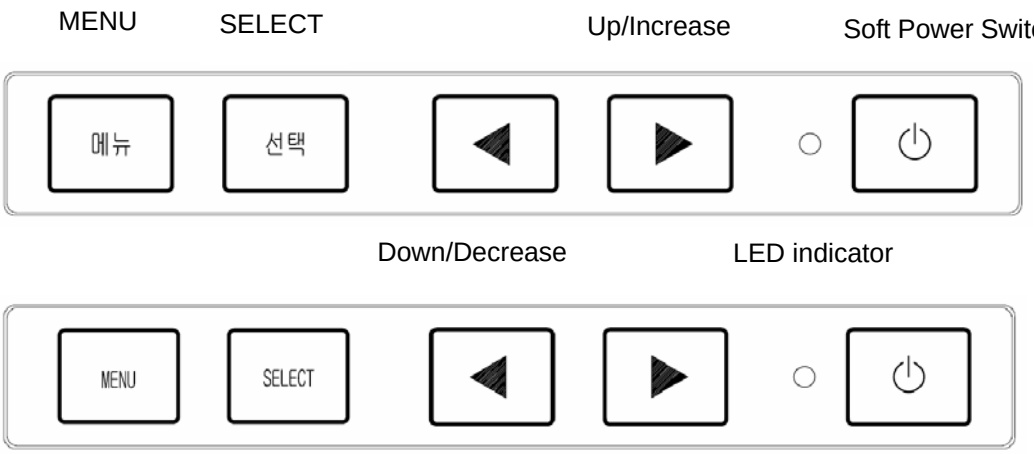
Cold Cathode Fluorescent Lamp (CCFL) in the backlight assemblies contains a small amount of mercury.
The backlight assembly is placed inside of the monitor and is not exposed to user.

1.4.3 Packing

The unit shall be packaged for international transport by air freight in accordance with best practices for insuring arrival at customer site in an undamaged condition.

2 User Controls

2.1 Operation



POWER ON AND OFF

Power ON: To turn the display on, press the soft-power switch. The LED indicator will turn green.
Power OFF: To turn the display off, press the soft power switch for 5 seconds. The LED indicator will be turned Amber color.

DISPLAY DIMMING CONTROLS

This TFT display features a fully dimmable image, which means it is capable of displaying a completely Black image when the Brightness "◀ and ▶" is pushed fully to counter-clockwise.

LED INDICATOR DIMMING

The LED light intensity is adjusted with the backlight.

HOT KEY

The user can assign various display function as hot keys

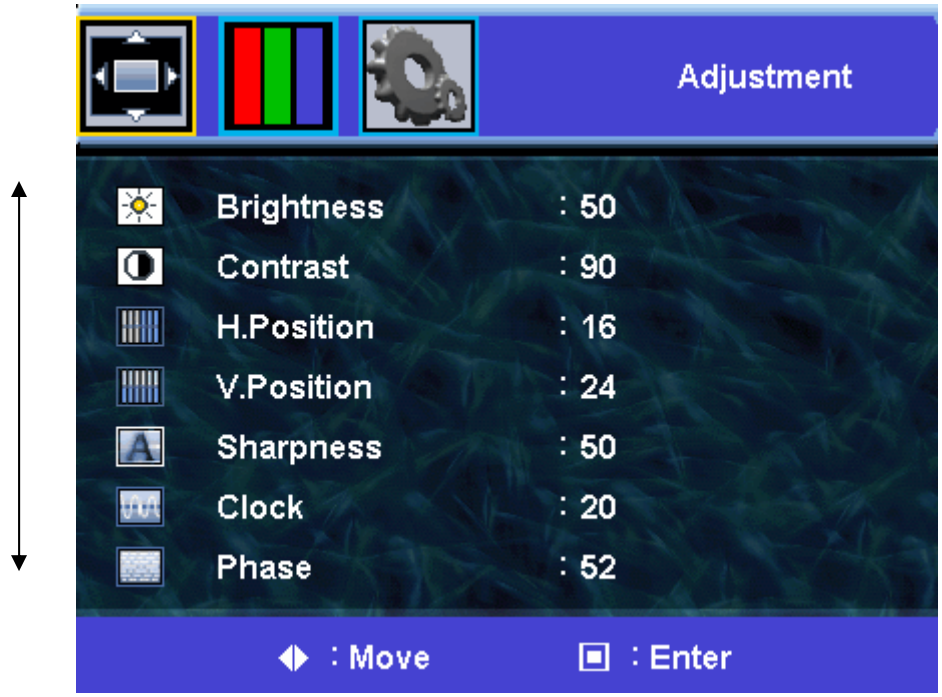
Hot Key1 is able to directly source change. Press the "SELECT".
Hot Key2 is able to directly auto adjustments in Analog. Press the "MENU" and "SELECT" for 5 seconds.
Hot Key3 is able to directly adjustments Color. Press the "◀" and "▶" for 5 seconds.

2.2 USER Control Access

1: Press the ”MENU” button. The OSD menu will show all the available functions you can adjust or control.
2: You can move to the next icon by pressing “◀ and ▶”.
3: Select options within icon menu by pressing “SELECT” button. The select option will turn yellow.
4: Use “◀” or “▶” button to decrease/increase values.
5: Move the selection left or right by using “◀” or “▶” button. The selected option will turn blue bar.
6: You can exit the pressing “MENU”.

2.3 OSD(ON SCREEN DISPLAY) Navigation

The description below is how to operate the control functions via OSD. The following is the initial OSD menu displayed by pressing “MENU”. It looks like the general computer monitor, so it is more users friendly.



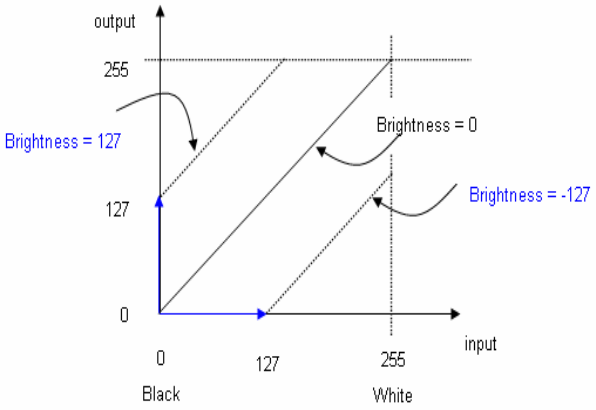
2.3.1 **Adjustment**

The “Adjustment” menu is for controlling the brightness, contrast, positions, sharpness, clock and phase.

3.3.1.1 BRIGHTNESS

The function is able the user to adjust brightness for the display, 50 is default value.

“Brightness” adjusts the light output by controlling the opening of Liquid Crystal, it is different from “Dim Brightness” which is adjusted by controlling the amount of light of backlight directly. But their effects are very similar. Its adjustment range is -127 to +127. The closer to -127 it is, the darker it is and the closer to +127 it is, the brighter it is. When one of the submenu of “Adjustment” is selected, the select button push to select it., so that adjusts the values of the brightness. When the menu button is pushed , going back to the upper menu.

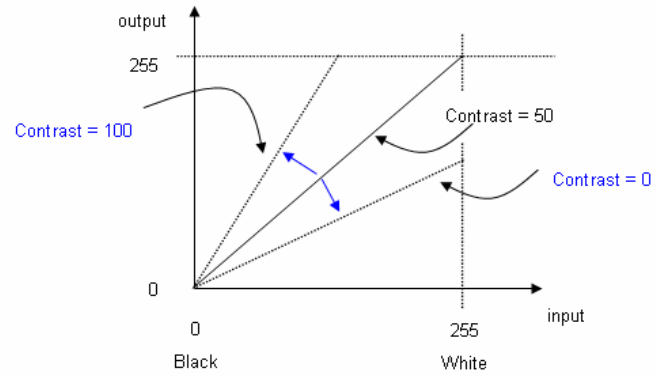


To adjust the brightness is to remap the input data to output data in terms of black and white level. It is to change the range of data, it means that if the brightness is 127, input data 0 - 255 is remapped to output data 127 – 255, so it looks like brighter. On the other way, if the input data is remapped to 0 – 127, it’ll be darker. It is to remap the data to LCD panel newly, but it is not to change the real input data. The brightness adjustment acts on the displayed image of all input data - R, G, and B by the same level.

3.3.1.2 CONTRAST

The function is able the user to adjust contrast for the display, 50 is default value.

"Contrast" is the submenu of "Adjustment", which sets up the gain of output video signal to panel. Its adjustment range is 0 to +100. When one of the submenus of "Adjustment" selected, the select button push to select it. so that adjust the values of the Contrast. When the menu button pushed, going to the upper menu.



To adjust the contrast is to remap the input data to the output data in terms of white level only. It means that if the contrast is max. 100, input data over 127 is mapped to 255, so, the depth between black and white is expanded. On the other way, if it is min. 0, input data 0 – 255 is mapped to 0 – 127, so, the depth is reduced. The contrast adjustment acts on the displayed image of all input data - R, G, and B by the same level. And it also controls the data to panel, but it does not adjust the input signal.

The function is able the user to adjust horizontal position of image

"H-Position" is the submenu of "Adjustment", which controls the horizontal position of image, Its adjustment range is 0 to +100 and default is 50. When the H-position of the submenu of "Adjustment" is selected, the select button push to select it. so that adjust the values of the H-position. When the encoder switch pushed , going to the upper menu.
Adjusting the "H-position" shifts the horizontal position of image. If the value of "H-position" is increased or decreased by pressing "◄ and ►", the "H-position" shifts to the right or to the left.

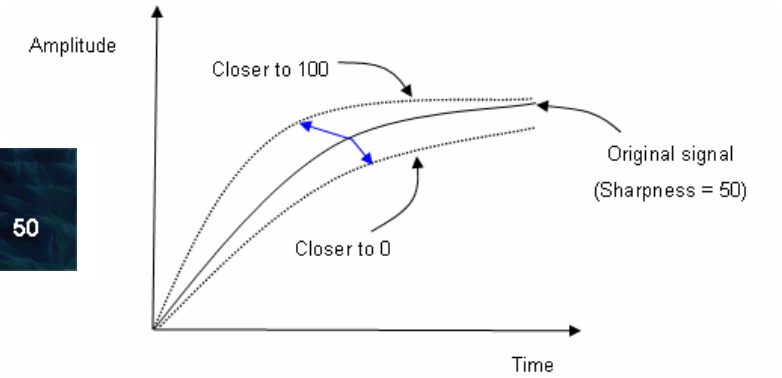
3.3.1.4 V.POSITION

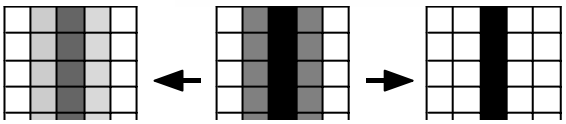
The function is able the user to adjust vertical position of the display.

"V-Position" is the submenu of "Adjustment", which controls the vertical position of image, Its adjustment range is 0 to +100 and default is 50. When the V-position of the submenu of "Analog adjustment" is selected, the select button push to select it. so that adjust the values of the V-position. When the encoder switch pushed , going to the upper menu.
Adjusting the V-position shifts the vertical position of image. If the value of "V-position" is increased or decreased by pressing "◄ and ►", the "V-position" shifts the upper or the lower.

3.3.1.5 SHARPNESS

The function is able the user to adjust sharpness for the display





"Sharpness" is for making a clear image. Its adjustment range is 0 to +100. When it is 100, the image is the most clear. When it is closer to 0, the image is blurred. This is not the absolute value on all signals. It may differ from every signal because the original source quality is very various. If the original signal is good quality, the image may be looked rather artificially than clearly in max. value 100. In this time, the value should be adjusted to lower value. If the original source is poor quality, the image becomes clearly more by adjusting closer to 100. The default value is 50.

Note: This is just for analog signal, and on digital, this function will be disabled.

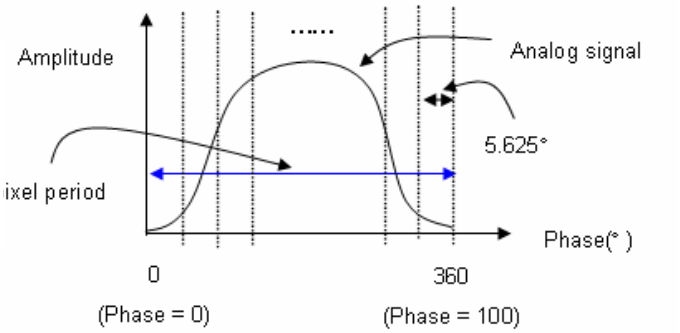
3.3.1.6 CLOCK

The function is able the user to adjust the number of sampling clock.

The “Clock” is the menu for the setting of the number of pixels corresponding to the pixel rate of the applied analog input signal. It represents the number of sampling clock during one period of horizontal sync signal.

3.3.1.7 PHASE

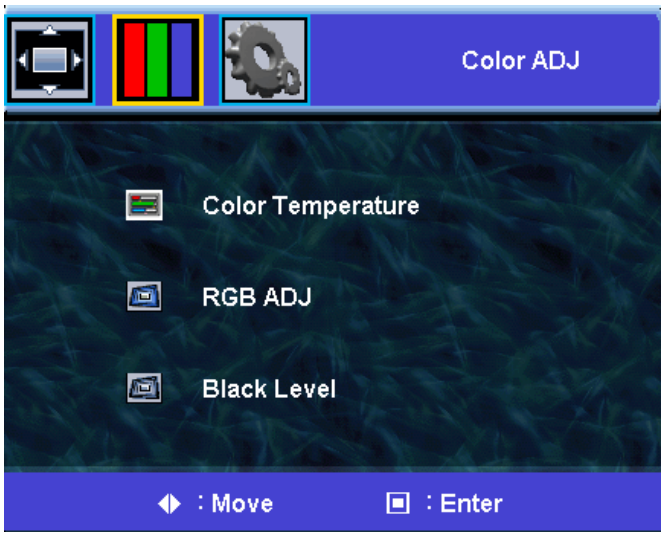
The function is able the user to adjust phase of sampling clock



Its range is 0˚ to 360˚, which is adjusted by 5.625˚ per one step and can be totally adjusted to 64 steps. This is not represented on OSD by a real phase value, but it is represented by 0 to 100 on OSD.

2.3.2 **COLOR ADJ**

The “COLORADJ” menu is for controlling the Color Temperature, RGB ADJ and Black.

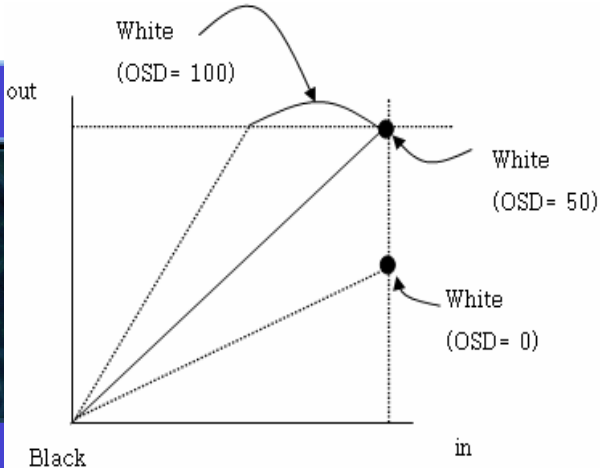


3.3.2.1 COLOR TEMPERATURE

The function is able the user to modify the color temperature of the picture for the Display.
Higher temperature : “cooler” picture. Lower temperature : “warmer” picture.
User can select one of 9200K, 6400K, 5600K and User color temperature measured
You can adjust color temperature via the User(RGB)

3.3.2.2 RGB ADJ

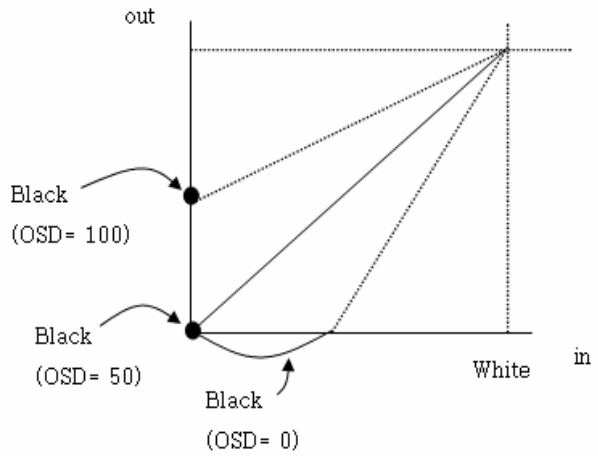
The function is able the user to adjust Red, Green and Blue offset for the display
These set up the gain of black level of input video signal to ADC amp (Analog to Digital Converter).
.



When all white levels are on the points of OSD 50, the amount of color is the same each other. But, if the level is moved closed to OSD 100, the amount of color to adjust is more, so, the color to adjust looks like strong. On the other way, if it goes to OSD 0, the amount of color to adjust is less, so, the color is felt weakly. If the color is changed in brighter level, adjust the white level. But it also effects on dark level.

3.3.2.3 BLACK LEVEL

The function is able the user to adjust Red, Green and Blue gain for the display
These set up the offset of video signal of ADC amp.



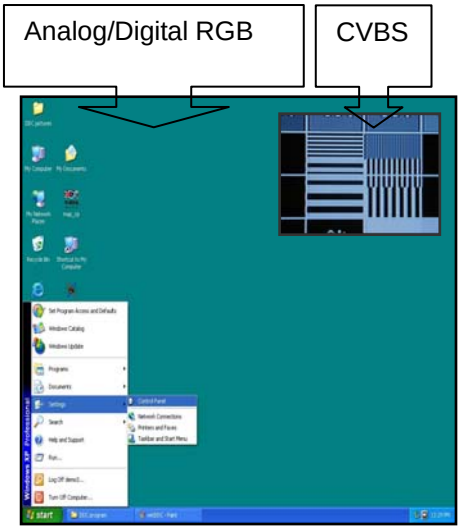
When all black levels are on the points of OSD 50, the amount of color is the same each other. But, if the level is moved closed to OSD 100, the amount of color to adjust is more, so, the color to adjust looks like strong. On the other way, if it goes to OSD 0, the amount of color to adjust is less, so, the color is felt weakly. If the color is changed in darker level, adjust the black level. But it also effects on bright level.

2.3.3 PIP MENU (CVBS Model Only)

The “PIP” menu is for controlling PIP(picture in picture) display.

3.3.3.1 PIP On/Off

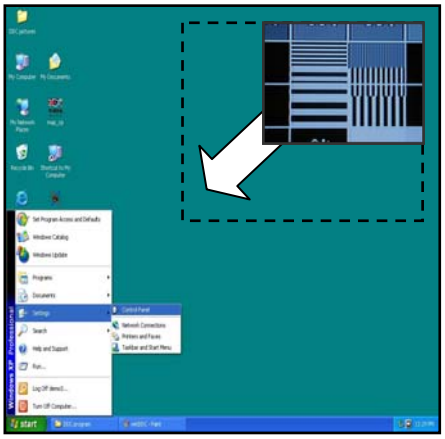
The function is able the user to enable/disable PIP display.



PIP is
Main window is displayed on the full screen at the same time as one sub window are displayed in inset window. Input source of main window is Analog or RGB/Digital RGB input and that of sub window is only CVBS input.

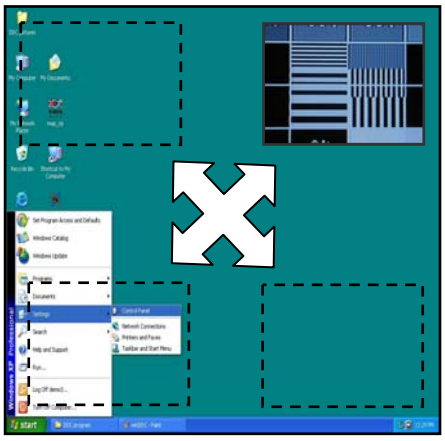
RDP2010 can receive Composite input and it’s also designed to show the images through Composite with Analog or Digital RGB signal at the same time. There are 2 kinds of size to be adjusted and position can be adjusted.

3.3.3.2 PIP Size



In PIP mode, it will change the size of the PIP to ‘Large’ (1/3 screen) or ‘Small’ (1/4 screen).

3.3.3.2 PIP Locate



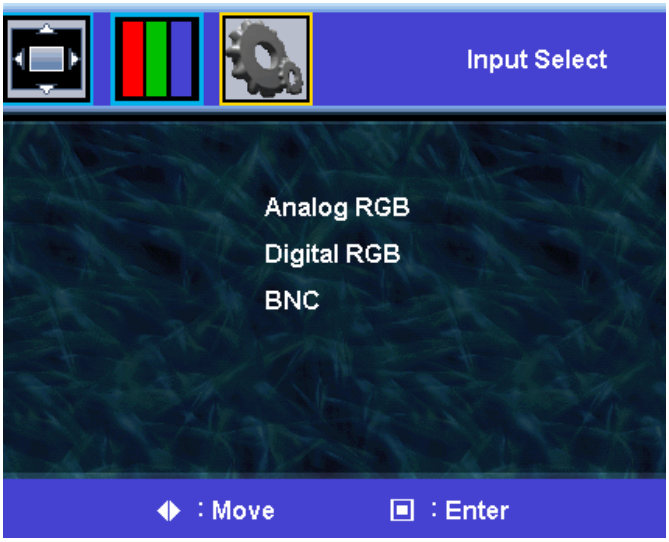
In PIP mode, it change the position of the PIP to ‘LeftTop’ , ‘RightTop’, ‘RightBottom’ or ‘LeftBottom’.

2.3.4 SETUP MENU

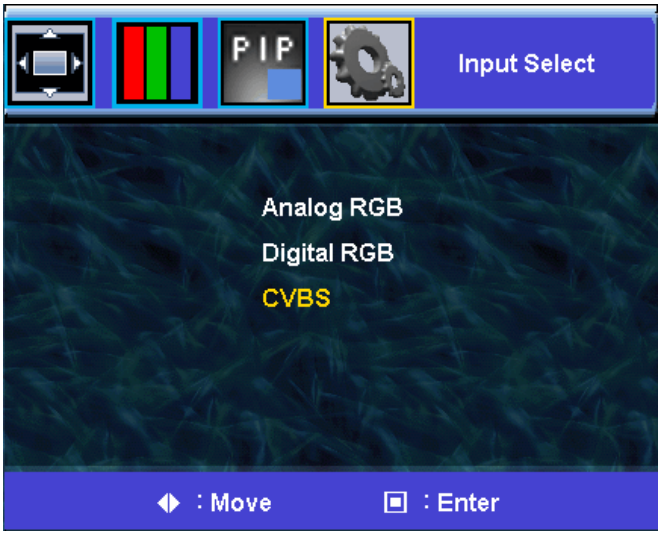
In this menu, user can set up the setting values.

3.3.3.1 INPUT SELECT

The function is able the user to select one of Analog RGB(D-sub), Digital RGB, BNC,CVBS and S-Video



< RGB(D-sub) / Digital RGB / BNC model >



< RGB(D-sub) / Digital RGB / CBVS model >

3.3.3.2 COMMUNICATION

“Communication” represents the communication setting between monitors or between the control system and the monitor

3.3.3.2.1 ID

This assigns the monitor’s number, range one to twelve, in order to identify the monitors, and it must be unique for distinguishing from each other. And, In the case of chaining several monitors thru communication port, the ID of monitor to be connected with control system must by One.

3.3.3.2.2 Baud Rate

“Baud Rate” is the submenu of “Set-Up” which assigns a communication rate, 2400, 4800, 9600, 57600, and 115200 baud rate, that the system can support.

3.3.3.2.3 Communication

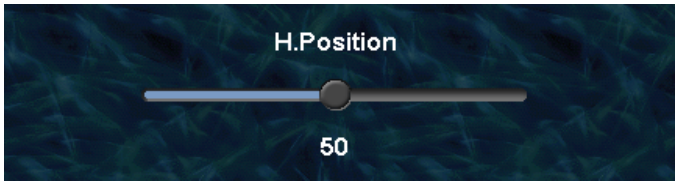
This assigns the communication mode. The monitor connecting with the control system is assigned the RS232 or RS422 and it connecting with other monitor is assigned to the RS485. So, one of three must be chosen as input communication mode.

3.3.3.3 OSD SETUP

"OSD Set Up" is the submenu of "Set-Up" which sets up the position of OSD, and OSD Timeout.

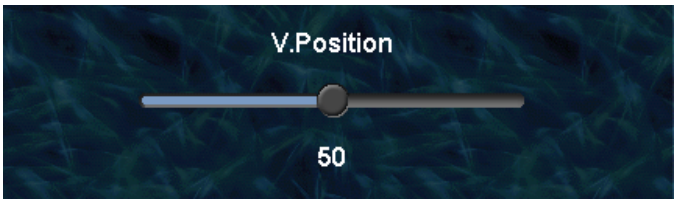
3.3.3.3.1 H.Position

This function is able to adjust the horizontal position of OSD.



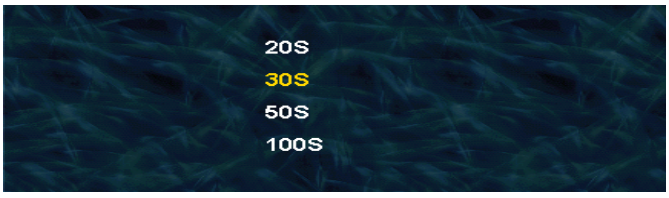
3.3.3.3.2 V.Position

This function is able to adjust the vertical position of OSD.



3.3.3.3.3 TIME OUT

"OSD Timeout" is the submenu of "OSD Set Up", which controls the time to display the OSD menu 20, 30, 50, and 100 : When the user don't touch anything, the OSD menu is disappeared after 20, 30, 50 or 100 seconds, which keeps display OSD.

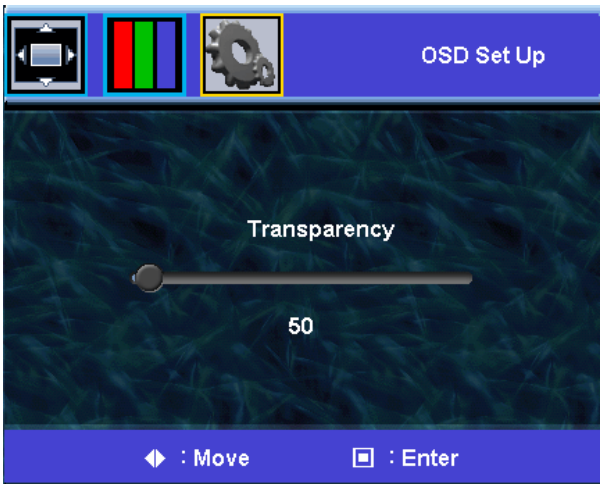


3.3.3.3.4 Language

This function is able to choose the OSD language, one of English or Korean.

3.3.3.3.5 Transparency

This function is able to choose the OSD Transparency.



3.3.3.4 FACTORY RECALL

"Factory Recall" is the menu for restoring to the factory setting values. The settings with which the display leaves factory are stored in a factory settings storage area on main control board. And the current settings are stored in a user settings storage area on main control board. At administrator level, the current settings are replaced by the factory settings. The user settings disappear after changing by the factory settings.

3.3.3.5 INFOMATION

This function describes the Serial Number, S/W version, Temperature, input source, communication Mode and the light of Backlight.

3.3.3.5.1 Serial NO.

"Serial No." describes the serial number of monitor. The serial number is unique on every monitor.

3.3.3.5.2 SW ver.

"S/W ver." describes the version of software installed on monitor.

3.3.3.5.3 Temp.

"Temp. Status" describes the current internal temperature status or the information of the warning level (65℃), the critical Value (80℃) and the safe level (64℃). See 1.1.6.4.

3.3.4.5.4 Input

A signal to display now on screen is described.

3.3.4.5.5 Comm.

“Comm.” represents a communication mode.

3.3.4.5.6 Backlight

“Backlight” represents the light of backlight.

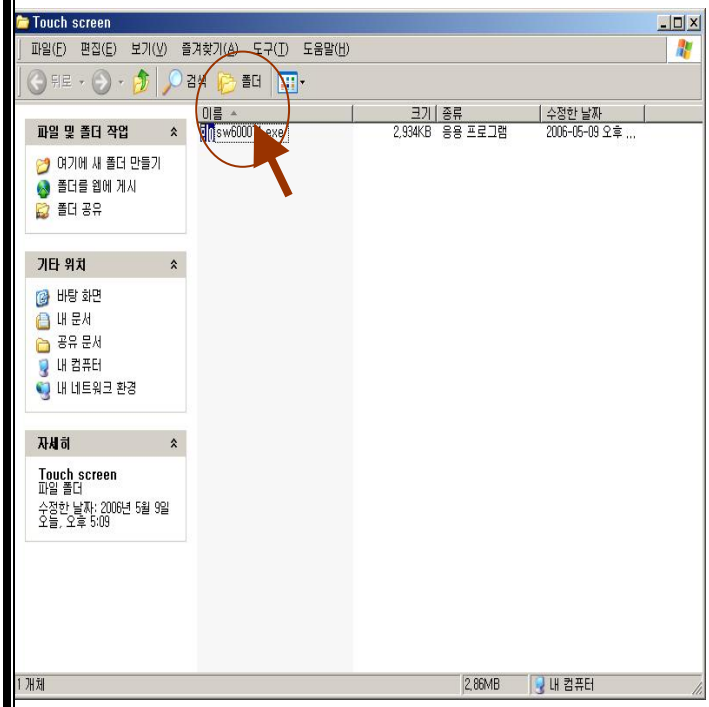
Appendix A: Touch screen driver installation(only for RDP2010TS)

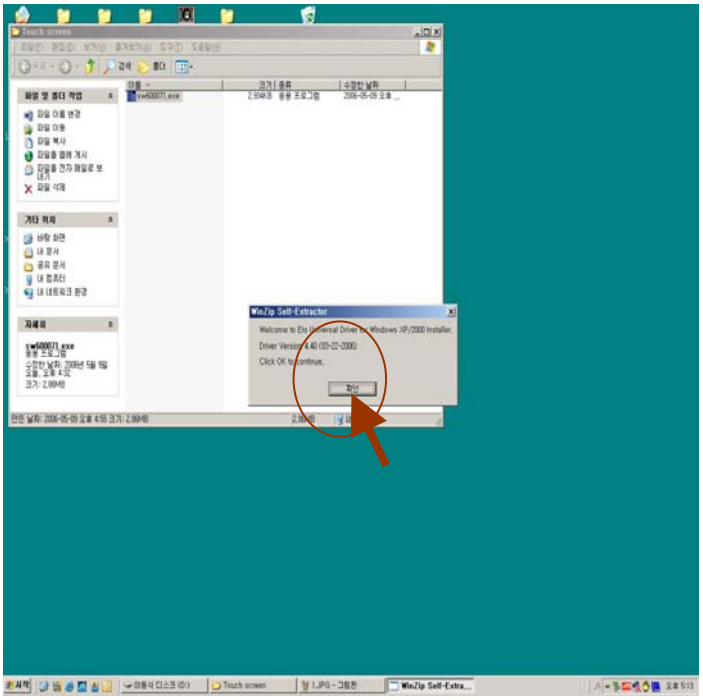
- How to install the touch screen driver (see the below figure)
  1. Dsub (DB9pin) cable connecting between a computer and the Touch screen serial control port
  2. Touch screen driver install
  3. Touch screen calibration

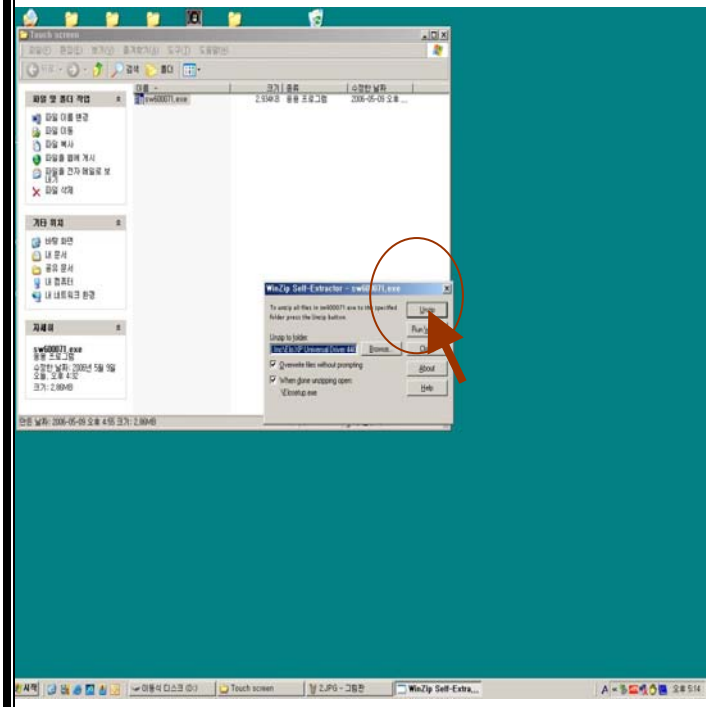
  Notice: If you want to calibrate the touch screen again and touch screen calibration don't adjust, You have to fallow the third procedure, touch screen calibration.

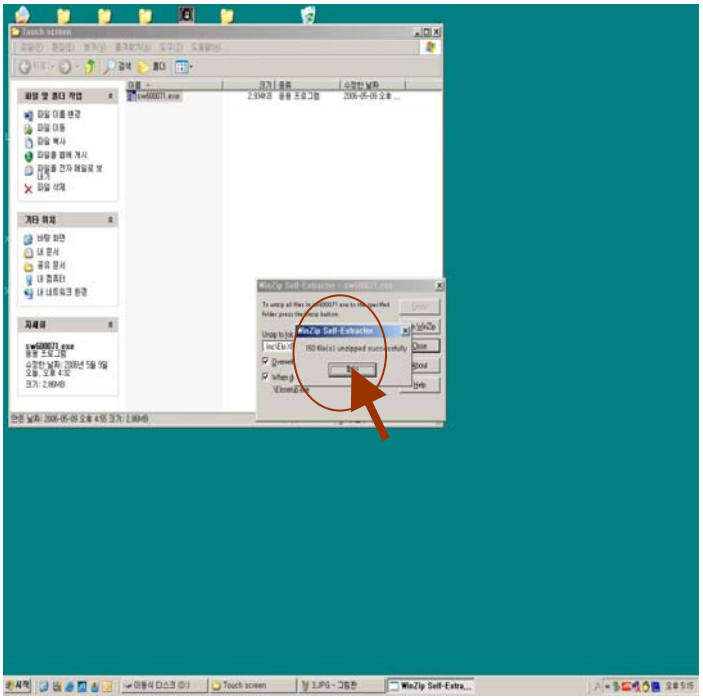
1. Dsub (DB9pin) cable connecting between a computer and the Touch screen serial control port for touch screen

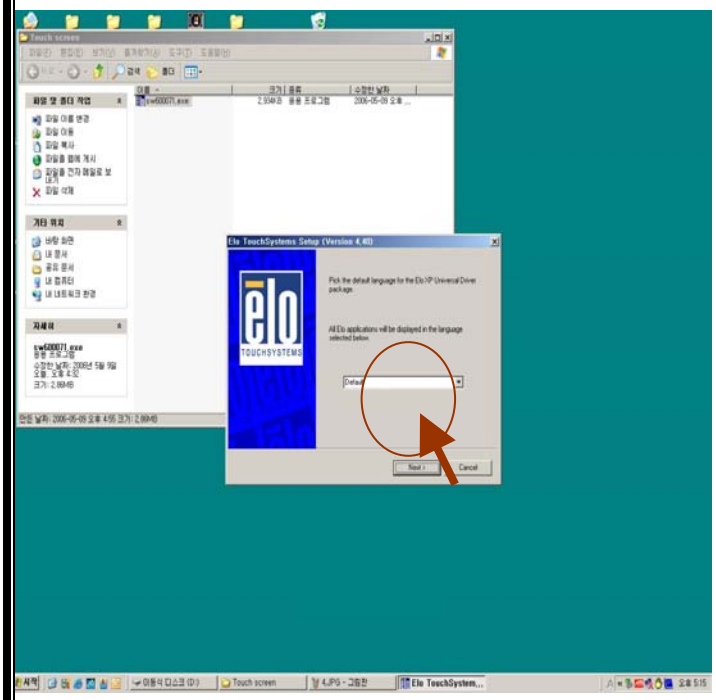
2. Touch screen driver install

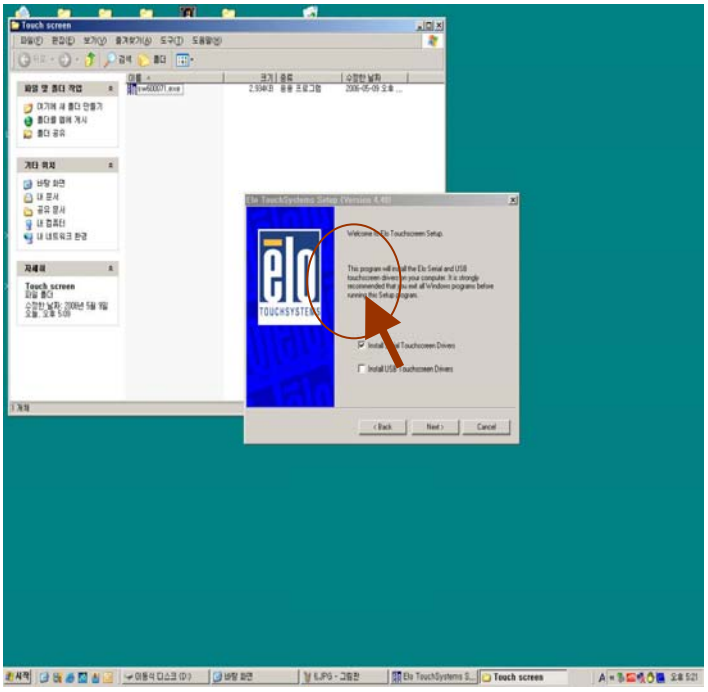


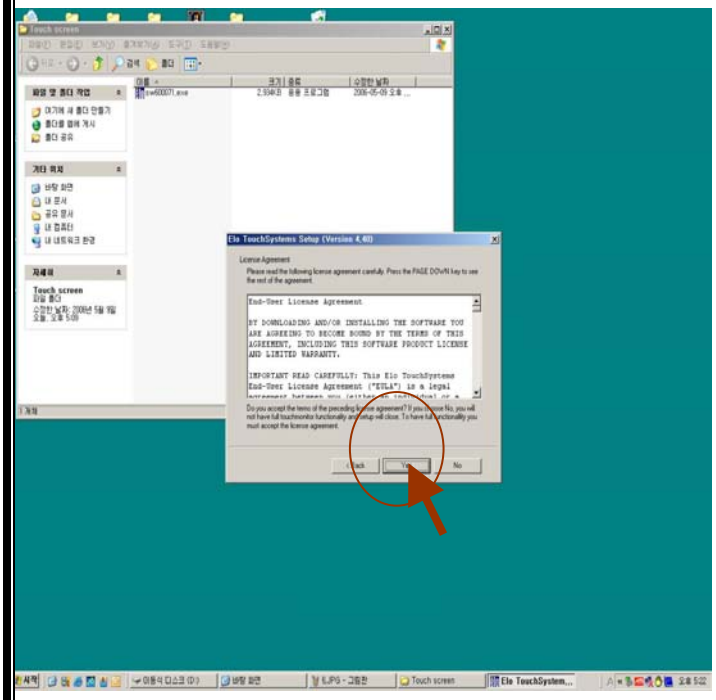


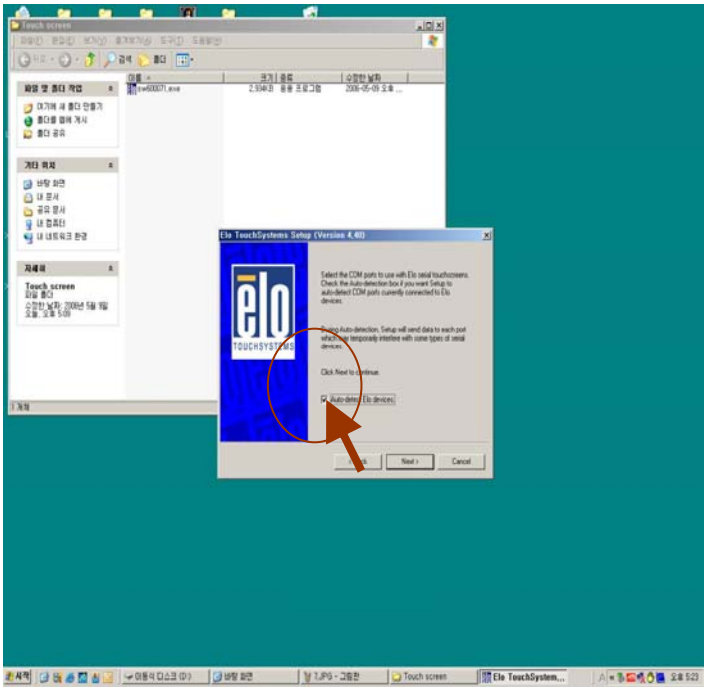


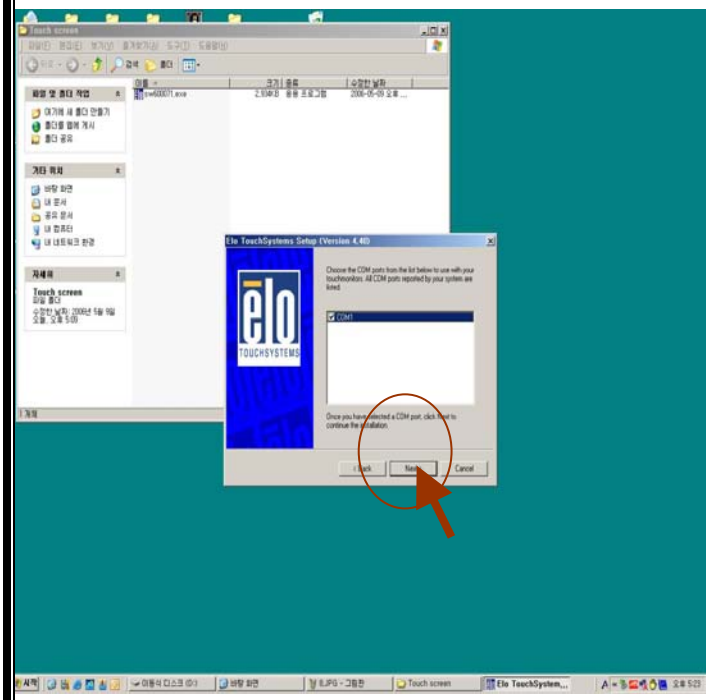


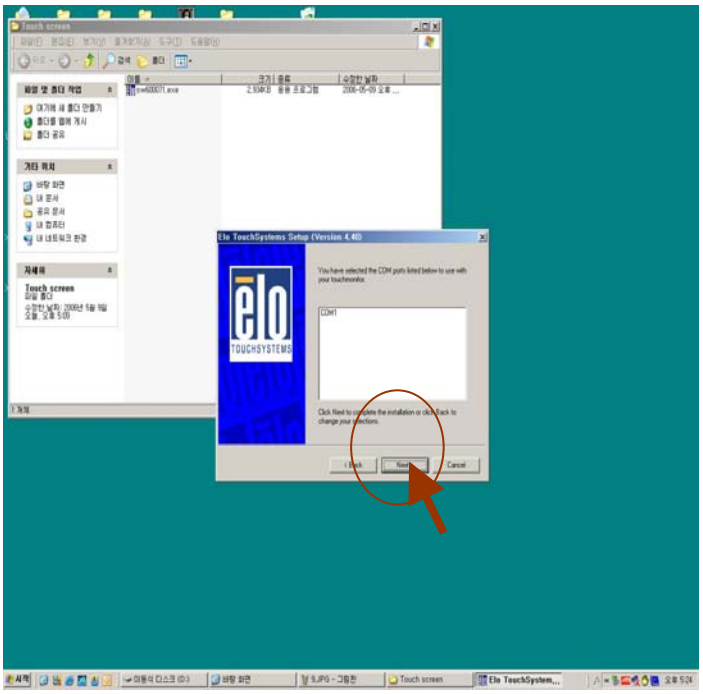

Elo TouchSystems Setup (Version 4.40)
elo
TOUCHSYSTEMS
Next >
Cancel

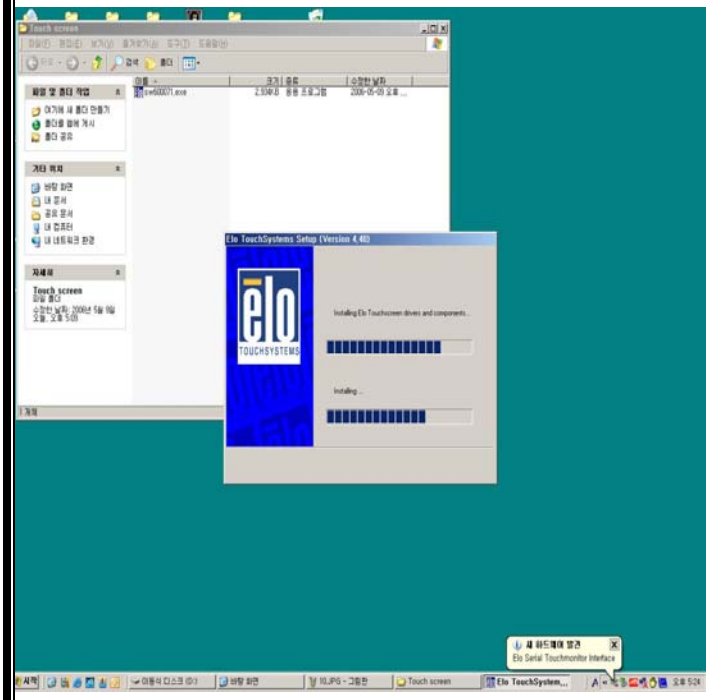

Touch screen
elo
TOUCHSYSTEMS
< Back
Next >
Cancel

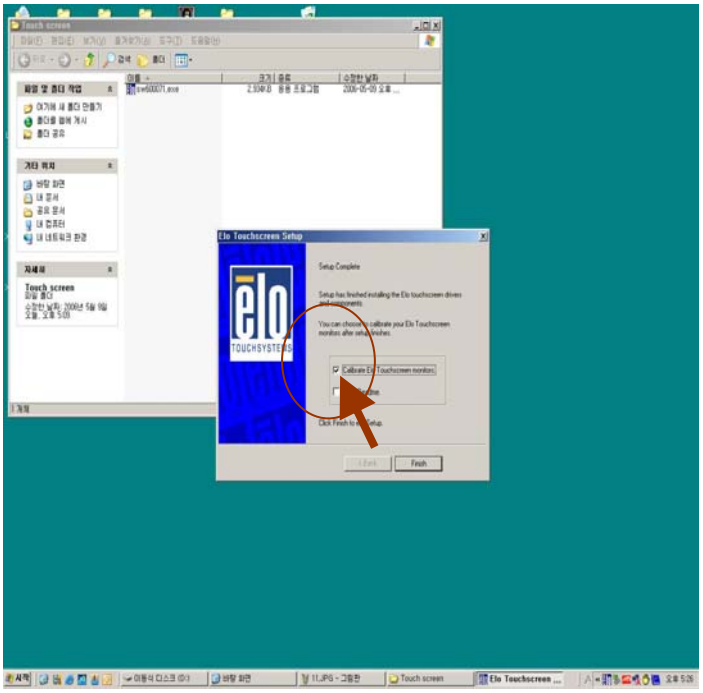

Elo TouchSystems Setup (Version 4.40)
End-User License Agreement
BY DOWNLOADING AND/OR INSTALLING THE SOFTWARE YOU ARE AGREEING TO BECOME BOUND BY THE TERMS OF THIS AGREEMENT, INCLUDING THIS SOFTWARE PRODUCT LICENSE AND LIMITED WARRANTY.
IMPORTANT READ CAREFULLY: This Elo TouchSystems End-User License Agreement ("ETLA") is a legal
< Back
Yes
No


Elo TouchSystems Setup (Version 4.40)
elo
TOUCHSYSTEMS
Click Next to continue.
Auto-detect Elo devices
< Back
Next >
Cancel

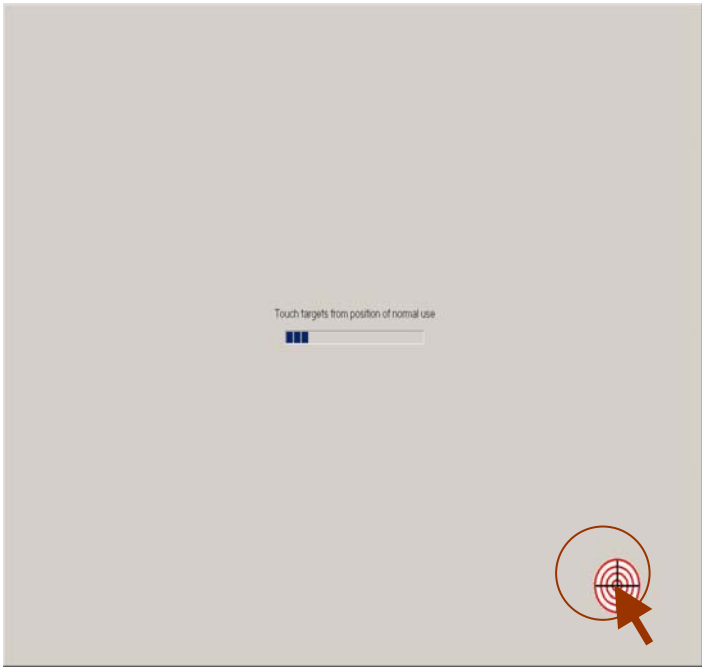


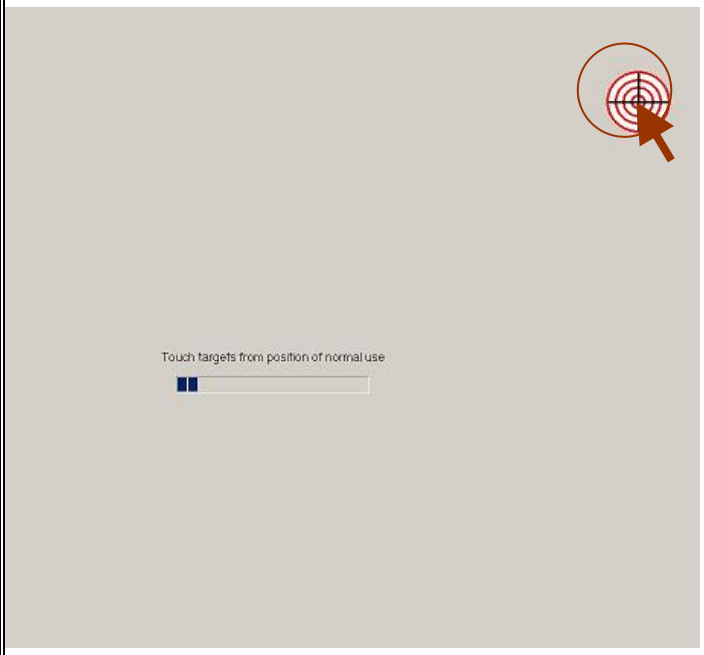


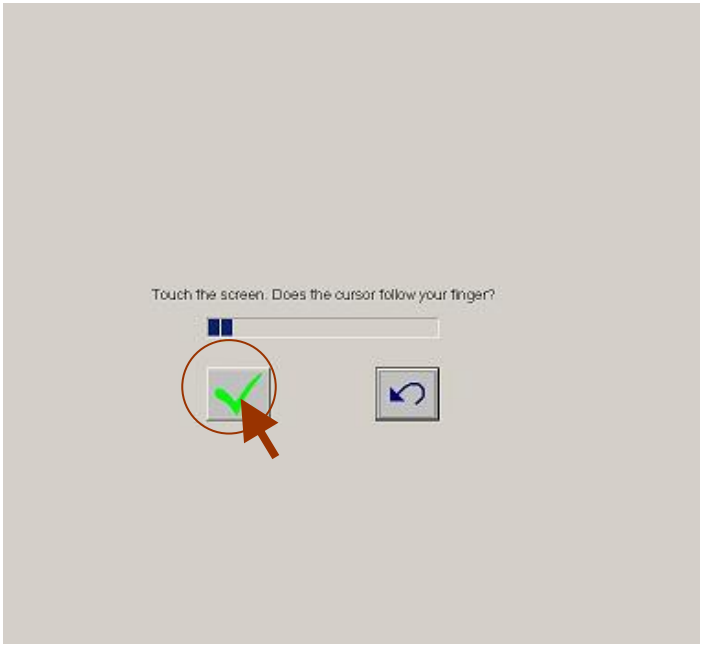




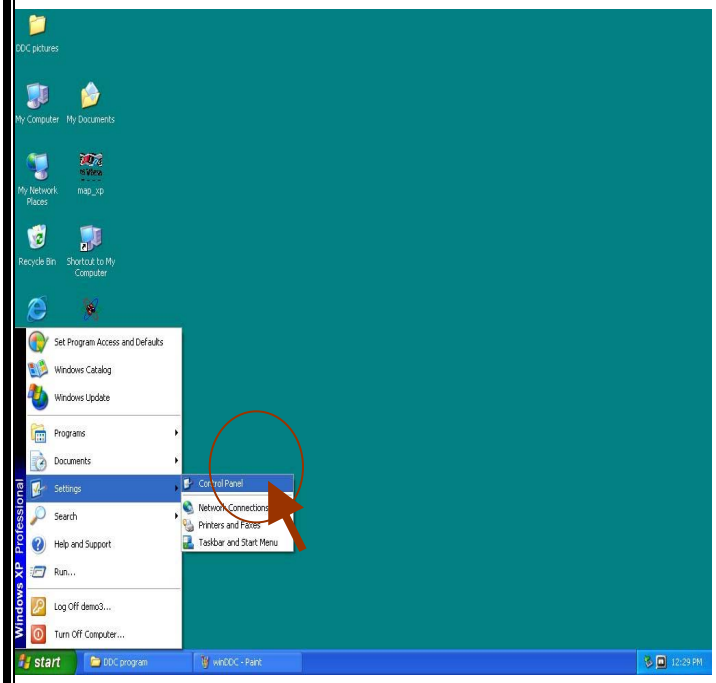
Push this point with a finger
or a gloved hand

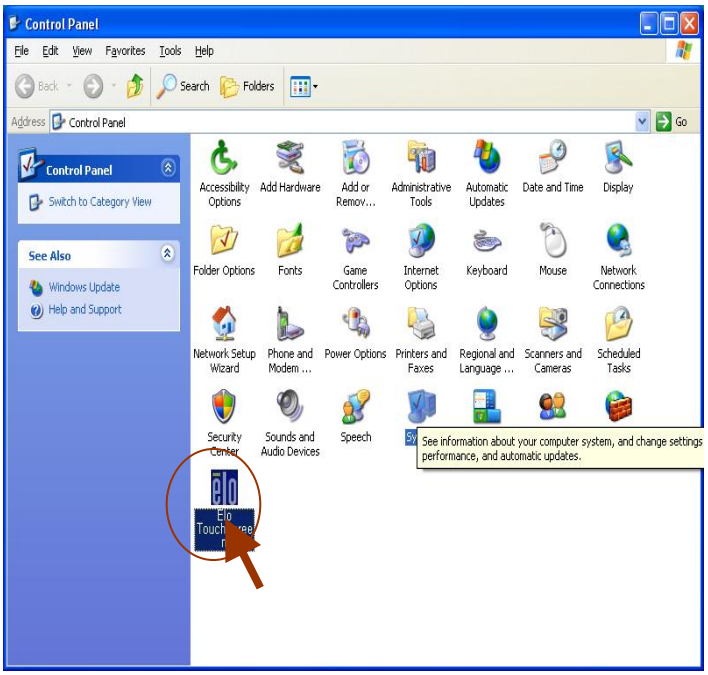


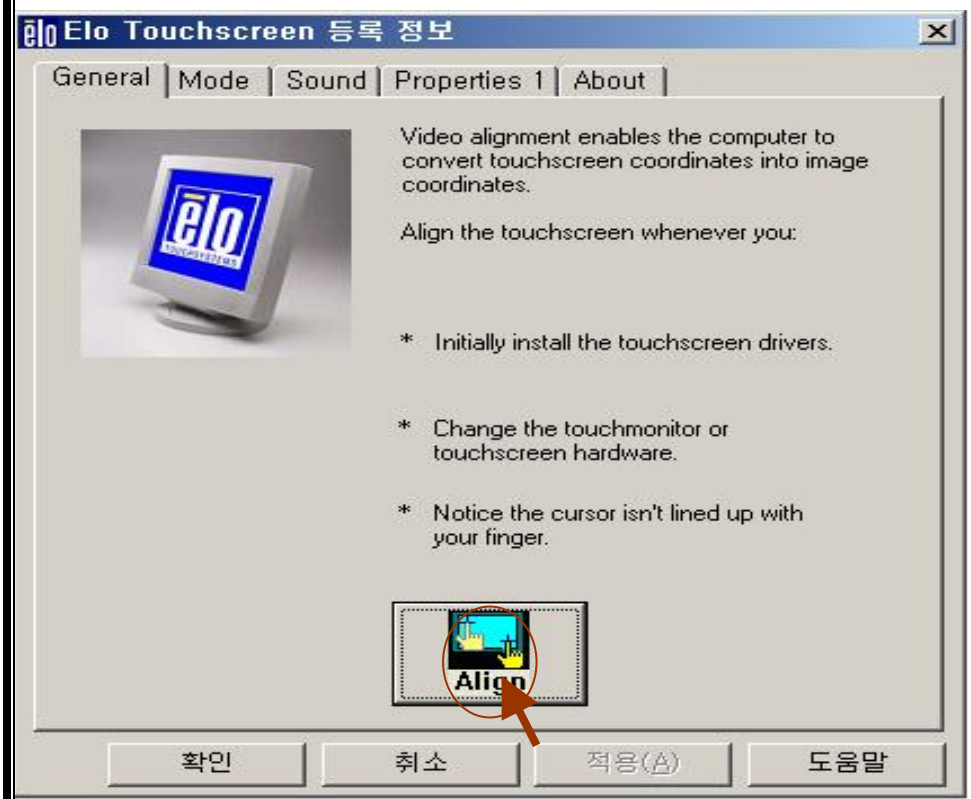




3. Touch screen calibration







Push this point with a finger or a gloved hand